

Industry Classification

Slide 1

In this presentation, we talk about how economic census data are organized.

Economic Census Table

Data classified by industry

NAICS code	Geographic area and kind of business	Establishments (number)	Sales (\$1,000)	Annual payroll (\$1,000)	Paid employees for pay period including March 12 (number)
COLORADO					
44-45	Retail trade.....	18 299	40 536 034	4 163 312	225 647
441	Motor vehicle & parts dealers..	1 791	10 597 755	880 854	28 164
4411	Automobile dealers	676	8 927 701	650 155	18 301
44111	New car dealers	324	8 264 839	601 851	16 532
441110	New car dealers	324	8 264 839	601 851	16 532
44112	Used car dealers	352	662 862	48 304	1 769
441120	Used car dealers	352	662 862	48 304	1 769
4412	Other motor vehicle dealers	215	559 447	51 358	1 942
44121	Recreational vehicle dls.	62	235 460	19 483	638

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Economic Census Table

Most statistics in the 1997 Economic Census are organized by the kind of business, or industry, as illustrated by the several types of motor vehicle dealers shown in the sample table.

Industry Classification

- Standard Industrial Classification (SIC) System
- Developed in 1930's
- Updated every 10-15 years
- Dominated by manufacturing

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Industry Classification

Since the 1930's, the U.S. Government's official system for classifying industries has been the Standard Industrial Classification (or SIC) system.

Not every data user has been familiar with the SIC, but we all recognize terms like manufacturing and retail trade, and those terms have been defined in the SIC system.

Since the SIC system was established, it has been updated every 10 to 15 years to reflect new industries, most recently in 1987.

But the SIC system still reflected an economy dominated by manufacturing, not the service economy into which we have evolved.

NAICS



North American Industry Classification System



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NAICS

America needed a better classification system, and now it has one.

The U.S. Government has retired the familiar SIC system in favor of the new North American Industry Classification System (pronounced nakes).

NAICS



North American Industry Classification System

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NAICS

As the title implies, NAICS has been developed jointly with our North American trading partners, Canada and Mexico to provide for comparable statistics.



NAICS is New

- New industries
- New sectors
- New numbering system

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NAICS is New

The most obvious differences between NAICS and SIC can be seen through

- New Industries
- New sectors
- And a new numbering system



New Industries in NAICS

Selected examples

Fiber optic cable manufacturing
Paging
Warehouse clubs
Food/health supplement stores
Pet supply stores
Telemarketing bureaus
HMO medical centers
Bed and breakfast inns
Diet and weight reducing centers

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New Industries in NAICS

NAICS has immediate benefits by identifying more than 350 new industries.

This slide shows a handful of examples, like paging and telemarketing bureaus, that reflect how our economy has been changing in recent years.



NAICS Sectors

11	Agriculture, Forestry, Fishing, and Hunting	55	Management of Companies and Enterprises
21	Mining	56	Administrative and Support and Waste Management and Remediation Services
22	Utilities	61	Educational Services
23	Construction	62	Health Care and Social Assistance
31-33	Manufacturing	71	Arts, Entertainment and Recreation
42	Wholesale Trade	72	Accommodation and Food Services
44-45	Retail Trade	81	Other Services (except Public Administration)
48-49	Transportation and Warehousing	92	Public Administration
51	Information		
52	Finance and Insurance		
53	Real Estate and Rental and Leasing		
54	Professional, Scientific and Technical Services		

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NAICS Sectors

At the same time, NAICS changes the way that industries are grouped into major economic sectors.

The SIC had 10 divisions, NAICS has 20.

We will say more about the new sectors in just a moment.



New Numbering System

NAICS

SIC

XX.....Industry Sector.....Division
 XXX.....Industry Subsector.....2-digit
 XXXX.....Industry Group.....3-digit
 XXXXX.....Industry.....
 XXXXXX.....US National Industry... } 4-digit

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New Numbering System

NAICS also introduces a new numbering system.

The new NAICS codes have 6 digits to replace the 4-digit SIC system.

You can think of there being an extra digit at front of the code and an extra digit at the back of the code. For example, 3-digit NAICS subsectors represent roughly the same level of detail as did the 2-digit SIC level.

Five digit codes represent NAICS industries—generally the level at which the three countries have corresponding classifications. We use the term U.S. Industry or US National Industry to refer to the six digit codes which in many cases go beyond what Canada and Mexico can provide.



New Numbering System

Example

Level	Code	Description
Sector	51	Information
Subsector	513	Broadcasting and Telecommunications
Industry Group	5133	Telecommunications
Industry	51332	Wireless Telecommunications
U.S. Industry	513321	Paging

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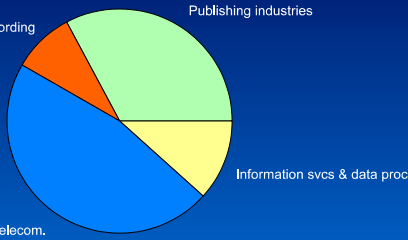
New Numbering System

Here is an actual example of the NAICS hierarchy.

Within the Information Sector, 51, there is a 3-digit subsector for Broadcasting and Telecommunications, a 4-digit industry group for Telecommunications, and a 5-digit industry for Wireless Telecommunications. Only the U.S. further defines a 6-digit industry for paging, as distinct from the other category not shown—Cellular and other Wireless Telecommunications. (513322)

Many users have hoped that going from a 4-digit SIC to a 6-digit NAICS code would mean orders of magnitude more detail. In fact, the number of classifications has gone up only about 15 percent.

The greatest significance is that the NAICS identifies important new industries and important new groupings.

<div data-bbox="66 134 155 218"> </div> <h2 data-bbox="224 163 496 205">New Sectors</h2> <table border="1" data-bbox="94 210 634 569"> <thead> <tr> <th>SIC Division</th><th>NAICS Sector</th></tr> </thead> <tbody> <tr> <td>Transportation, Communications, and Utilities</td><td>Utilities Transportation and Warehousing</td></tr> <tr> <td>Finance, Insurance, Real Estate</td><td>Finance and Insurance Real Estate and Rental and Leasing</td></tr> <tr> <td>Retail Trade</td><td>Retail Trade Accommodations and Food Services</td></tr> <tr> <td>Service Industries</td><td>Professional, Scientific, and Technical Services Administrative & Support and Waste Management & Remediation Services Educational Services Health Care and Social Assistance Arts, Entertainment, and Recreation Information</td></tr> </tbody> </table>	SIC Division	NAICS Sector	Transportation, Communications, and Utilities	Utilities Transportation and Warehousing	Finance, Insurance, Real Estate	Finance and Insurance Real Estate and Rental and Leasing	Retail Trade	Retail Trade Accommodations and Food Services	Service Industries	Professional, Scientific, and Technical Services Administrative & Support and Waste Management & Remediation Services Educational Services Health Care and Social Assistance Arts, Entertainment, and Recreation Information	<h3 data-bbox="672 134 789 168">Slide 11</h3> <h3 data-bbox="1367 134 1557 168">New Sectors</h3> <p data-bbox="672 207 1557 275">This slide shows how new sectors have been broken out from the familiar divisions of the SIC.</p> <p data-bbox="672 281 1557 348">There are new sectors, like Utilities, and Transportation and Warehousing, that were part of broader categories in the SIC.</p> <p data-bbox="672 354 1557 422">Most dramatic are the new differentiations within service industries—6 new sectors</p>
SIC Division	NAICS Sector										
Transportation, Communications, and Utilities	Utilities Transportation and Warehousing										
Finance, Insurance, Real Estate	Finance and Insurance Real Estate and Rental and Leasing										
Retail Trade	Retail Trade Accommodations and Food Services										
Service Industries	Professional, Scientific, and Technical Services Administrative & Support and Waste Management & Remediation Services Educational Services Health Care and Social Assistance Arts, Entertainment, and Recreation Information										
<div data-bbox="66 596 155 680"> </div> <h2 data-bbox="224 625 496 667">New Sectors</h2> <table border="1" data-bbox="94 672 634 1031"> <thead> <tr> <th>SIC Division</th><th>NAICS Sector</th></tr> </thead> <tbody> <tr> <td>Transportation, Communications, and Utilities</td><td>Utilities Transportation and Warehousing</td></tr> <tr> <td>Finance, Insurance, Real Estate</td><td>Finance and Insurance Real Estate and Rental and Leasing</td></tr> <tr> <td>Retail Trade</td><td>Retail Trade Accommodation and Food Services</td></tr> <tr> <td>Service Industries</td><td>Professional, Scientific, and Technical Services Administrative & Support and Waste Management & Remediation Services Educational Services Health Care and Social Assistance Arts, Entertainment, and Recreation Information</td></tr> </tbody> </table>	SIC Division	NAICS Sector	Transportation, Communications, and Utilities	Utilities Transportation and Warehousing	Finance, Insurance, Real Estate	Finance and Insurance Real Estate and Rental and Leasing	Retail Trade	Retail Trade Accommodation and Food Services	Service Industries	Professional, Scientific, and Technical Services Administrative & Support and Waste Management & Remediation Services Educational Services Health Care and Social Assistance Arts, Entertainment, and Recreation Information	<h3 data-bbox="672 596 789 630">Slide 12</h3> <h3 data-bbox="1367 596 1557 630">New Sectors</h3> <p data-bbox="672 669 1557 846">Yet that straightforward chart is really an oversimplification. In fact, major chunks of service industries (as defined in the SIC) have gone into the new Accommodation and Food Services sector and the Real Estate and Rental and Leasing sector.</p> <p data-bbox="672 852 1557 995">And the new Information sector shown at the bottom of the screen is really getting its largest component—communications—from the old transportation, communications, and utilities division of the SIC.</p>
SIC Division	NAICS Sector										
Transportation, Communications, and Utilities	Utilities Transportation and Warehousing										
Finance, Insurance, Real Estate	Finance and Insurance Real Estate and Rental and Leasing										
Retail Trade	Retail Trade Accommodation and Food Services										
Service Industries	Professional, Scientific, and Technical Services Administrative & Support and Waste Management & Remediation Services Educational Services Health Care and Social Assistance Arts, Entertainment, and Recreation Information										
<div data-bbox="66 1058 155 1163"> </div> <h2 data-bbox="201 1113 539 1150">Information Sector</h2> <p data-bbox="305 1159 422 1180">Created from</p> <ul data-bbox="120 1218 634 1472" style="list-style-type: none"> Manufacturing Publishing Transportation, Communication, and Utilities Broadcasting and Telecommunications Service Industries Motion Picture and Sound Recording Information Services and Data Processing Libraries 	<h3 data-bbox="672 1058 789 1092">Slide 13</h3> <h3 data-bbox="1276 1058 1557 1092">Information Sector</h3> <p data-bbox="672 1131 1557 1199">Industries in the new Information Sector create, distribute, or provide means of access to information.</p> <p data-bbox="672 1205 1557 1310">You may have never thought of newspaper publishing as a manufacturing activity. But that is where the SIC put it. In NAICS, publishing anchors the new information sector.</p> <p data-bbox="672 1316 1557 1383">The information sector also brings in broadcasting and telecommunications.</p> <p data-bbox="672 1390 1557 1423">Movie production and sound recording fit in, too.</p> <p data-bbox="672 1430 1557 1530">Information services round out this new information sector, including both traditional libraries and the new high tech internet service providers and search engines.</p>										
<div data-bbox="66 1558 155 1663"> </div> <h2 data-bbox="181 1600 600 1638">Information Subsectors</h2> <p data-bbox="263 1650 457 1675">Employment, 1997</p> 	<h3 data-bbox="672 1558 789 1591">Slide 14</h3> <h3 data-bbox="1201 1558 1557 1591">Information Subsectors</h3> <p data-bbox="672 1631 1557 1774">Data from the 1997 Economic Census demonstrate that Broadcasting and Telecommunications is the largest component of the new Information Sector, followed by Publishing.</p> <p data-bbox="672 1780 1557 1848">With the growth of Internet companies, it will be interest to watch how this sector changes and expands in future years.</p>										



Accommodation and Food Services

Created from

Service Industries

Hotels and other lodging

Retail Trade

Eating and drinking places

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Accommodation and Food Services

The new accommodation and food services sector was created by marrying the hotel and lodging industries, from the old Service Industries division, with eating and drinking places from retail trade.

Retail trade is, of course, a very familiar concept. In 1992, Eating and drinking places accounted for about 10 percent of retail sales, and over a third of retail employment. Now that large chunk is removed from retail trade.



Retail vs Wholesale

Retail Trade

In SIC

Sells to consumers

In NAICS

Location attracts public
Advertise to public

Display merchandise

Wholesale Trade

Sells to business

Office or warehouse
Advertise to trade
Display little or no merchandise

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Retail vs Wholesale

But there is more.

The distinction between retail and wholesale trade, in the SIC, was based on who the customer was. Retailers were those who sold to consumers, and wholesalers sold to businesses and institutions. Then along came a variety of computer stores and office supply stores and building material stores that sold to both businesses and individuals. The distinction no longer worked.

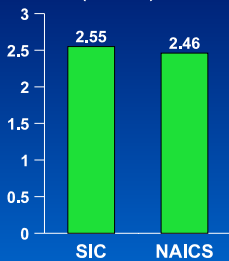
In NAICS, a retailer is characterized by the way it does business—with a storefront, advertising to the public, and display of merchandise—not by who its customer is.

The net effect of these changes is to subtract some activity from wholesale trade and add it to retail trade.

Two Views of 1997 Retail Trade

Sales

(\$ trillion)



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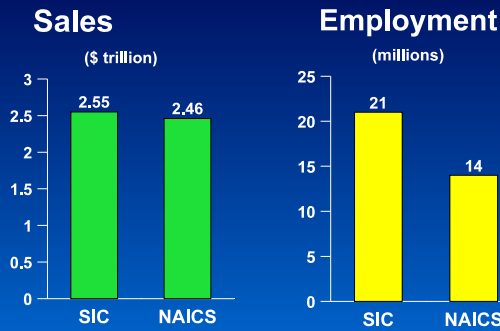
Two Views of 1997 Retail Trade

Looking at 1997 retail sales as classified by SIC and NAICS, they don't look all that much different.

The inflow of wholesalers into retail trade appears to have offset much of the loss of restaurants to the new accommodations and foodservices sector.

At least that is the way it looks in terms of sales.

Two Views of 1997 Retail Trade



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Two Views of 1997 Retail Trade

But the picture is much different in employment.

Restaurants tend to have lots of employees relative to their sales.

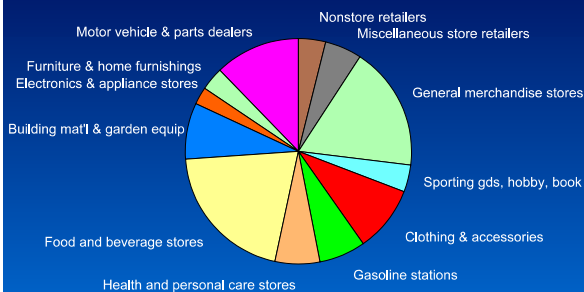
The formerly wholesale establishments that came in to retail have much fewer employees relative to sales.

Thus, In terms of employment, retail trade under SIC and NAICS look quite different.



Retail Trade Subsectors

Employment, 1997



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Retail Trade Subsectors

Retail trade under NAICS is divided into 12 subsectors.

In terms of employment, food and beverage stores are the largest group, followed by general merchandise stores, like department stores.

In terms of revenue, it is actually Motor Vehicle Dealers that bring in the most sales.

—The top wedge is one to watch. Nonstore Retailers is an obscure title, but one of its major components is Electronic Shopping and Mail-Order Houses. E-Commerce was not yet very large in 1997, but we expect to see explosive growth in future years. In fact, we will be changing NAICS again in 2002 to separate out Electronic Shopping and Electronic Auctions from conventional Catalog and Mail Order Houses.

Manufacturing

Transferring out—

Publishing - Logging - Auxiliaries

Transferring in—

Retail bakeries - Dental labs - Tire retreading

Brings together—

Computers, electronic equipment, components

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Manufacturing

Manufacturing is another sector that retained its old title, even though changed both in scope and in internal organization.

We referred earlier to publishing as an industry group that moved out of manufacturing (3% of mfg shipments)

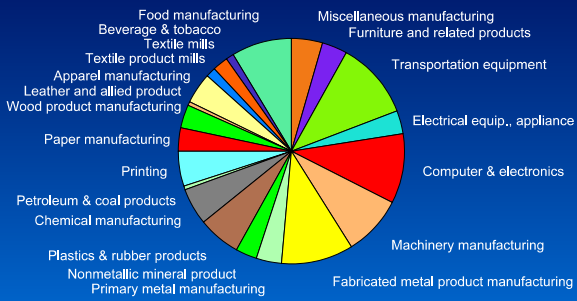
A few other segments are moving out of manufacturing, while others are moving in, but they are all very small.

One particularly welcome change is in the creation of a new subsector of manufacturing for computers and electronic equipment. Under SIC, computers were buried in industrial machinery, electronics were part of electrical equipment, and instruments were in the same category as medical supplies.



Manufacturing Subsectors

Employment, 1997



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Manufacturing Subsectors

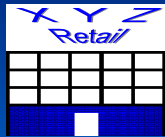
The 21 subsectors in manufacturing make for a complicated pie chart.

Transportation Equipment is the subsector of Manufacturing with the most employees; not surprising given that this category includes both automotive manufacturing and aerospace.

Fabricated Metal Product Manufacturing comes in second, then Computer and Electronic Product Manufacturing.

Establishment

A store, warehouse, factory, etc. at a single physical location



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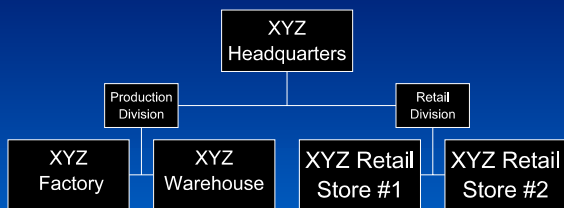
Establishment

Before we go further, let's make sure we understand just what it is that is being classified by industry.

A business establishment is a store, warehouse or factory operating at a specific physical location.

Company

One or more establishments under common ownership or control



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Company

That is not the same thing as a company.

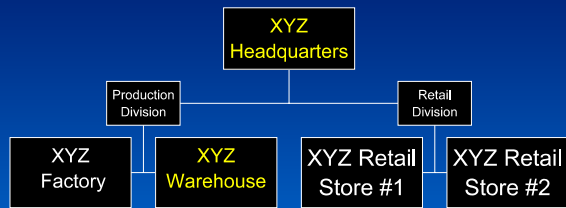
A company consists of one or more establishments under common ownership or control. We require each company to give us separate data for each of their establishments, because frequently the different establishments do different things, and typically the different establishments are located in different geographic areas.

So it is each establishment that gets a NAICS code, not the company as a whole.

And it is the number of establishments, not the number of companies, that is featured in most census statistics.

Auxiliary Establishments

Auxiliaries: establishments of multi-establishment firms that provide services to other owned establishments



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Auxiliary Establishments

Auxiliary establishments are establishments in multi-establishment companies that primarily provide services to other establishments in the same company.

The most important type of auxiliary is the central administrative office or company headquarters, but there are also company warehouses, trucking offices, R&D facilities, data processing offices, and so forth.

If these entities operate out of separate locations, we ask companies to report them as separate establishments.



Classifying Auxiliaries by Activity

- **Auxiliaries:** establishments of multi-establishment firms that provide services to other owned establishments
- **In SIC**--Classified by industry
- **In NAICS**--Classified by activity
- **New sector:**

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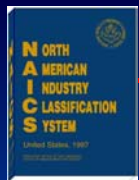
Classifying Auxiliaries by Activity

The reason we bring them up is because NAICS and SIC treat auxiliary establishments differently.

Under SIC auxiliary establishments were classified according to the primary industry of the parent company. For example, warehouses of an auto manufacturer were classified as manufacturing, not warehousing.

Under NAICS, auxiliaries are classified by their own primary activity. Warehouses are classified in the Warehousing and Storage industry, R&D with other Scientific research and development services, etc.

And company headquarters have been placed in a brand new sector (55) for the Management of Companies and Enterprises.



NAICS Manual

In Print
On CD
At www.census.gov/naics

- Definitions for each industry
- Alphabetic index
- Correspondence tables
 - NAICS to SIC
 - SIC to NAICS

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NAICS Manual

There are many resources to help you make the shift from SIC to NAICS

[One of them is the brochure "New Data for a New Economy", in your packet.]

The definitive resource is the NAICS Manual, available in print, on CD, and at our web site.

The manual includes definitions for each industry, an alphabetic index, and detailed tables illustrating the correspondence between NAICS and SIC, and vice versa.

Table 1 Codes: u-U.S. only; c-U.S. and Canada; E-existing industry; N-new; R-revised; *-part

1997 NAICS	1997 NAICS-U.S. Description	Codes	1987 SIC	1987 U.S. SIC Description
511	Publishing Industries			
5111	Newspaper, Periodical, Book, and Database Publishers			
51111	Newspaper Publishers	E	2711	Newspapers: Publishing, or Publishing and Printing
51112	Periodical Publishers	R	2721	Periodicals: Publishing, or Publishing and Printing
			*2741	Miscellaneous Publishing (shopping news)
51113	Book Publishers	R	*2731	Books: Publishing, or Publishing and Printing (except music books)
			*2741	Miscellaneous Publishing (technical manuals and books)
51114	Database and Directory Publishers	N	*2741	Miscellaneous Publishing (database publishers)
			*7331	Direct Mail Advertising Services (mailing list compilers)
51119	Other Publishers			
511191	Greeting Card Publishers	u R	*2771	Greeting Cards (publishing greeting cards)

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Correspondence Table 1

This illustration from the web site shows the new publishing industries within NAICS.

Newspaper publishing (NAICS 51111) is, one-for-one, the same as SIC 2711, and the table includes an E code to tell you that this is simply an existing industry.

Periodical and book publishers have a code R to tell you these industries have been revised from their SIC counterparts.

Database and Directory publishers (NAICS 51114) have a code N for a new industry, without a real counterpart in SIC.

Table 1 Codes: u-U.S. only; c-U.S. and Canada; E-existing industry; N-new; R-revised; *-part

1997 NAICS	1997 NAICS-U.S. Description	Codes	1987 SIC	1987 U.S. SIC Description
5112	Software Publishers			
51121	Software Publishers	R	*7372	Prepackaged Software (software publishing)

Codes: E-existing industry; N-new industry; R-revised industry; *-indicates part of a 1987 SIC

Table 2 @Indicates time series break >3% of 1992 value of shipments

1987 SIC	1987 U.S. SIC Description	1997 NAICS	1997 NAICS-U.S. Description
7372	Prepackaged Software		
	Software Publishing	51121	Software Publishers
	Reproduction of Software	334611	Software Reproducing

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Tables 1 and 2: Software Publishing

The web site allows you to look at tables 1 and 2 together. That's NAICS-to-SIC on top and SIC-to-NAICS on the bottom.

In table 1, an asterisk next to an SIC code means that only part of the SIC is there.

We can see that software publishers represent only part of SIC 7372, prepackaged software.

By clicking on the SIC code, the web site brings up the SIC to NAICS correspondence table at the bottom. There we can see what happened to the other part of SIC 7372. The SIC was simply broken into 2 NAICS codes:

Software publishers (or creation—which is part of the new information sector)

And software reproducing—the manufacturing activity of stamping out software CDs and packaging them for market.

Table 1 Codes: u-U.S. only; c-U.S. and Canada; E-existing industry; N-new; R-revised; *-part

1997 NAICS	1997 NAICS-U.S. Description	Codes	1987 SIC	1987 U.S. SIC Description
51119	Other Publishers			
511191	Greeting Card Publishers	u R	*2771	Greeting Cards (publishing greeting cards)

Table 2 @Indicates time series break >3% of 1992 value of shipments

1987 SIC	1987 U.S. SIC Description	1997 NAICS	1997 NAICS-U.S. Description
2771@	Greeting Cards		
	Lithographic Printing of Greeting Cards	323110	Commercial Lithographic Printing (pt)
	Gravure Printing of Greeting Cards	323111	Commercial Gravure Printing (pt)
	Flexographic Printing of Greeting Cards	323112	Commercial Flexographic Printing (pt)
	Screen Printing of Greeting Cards	323113	Commercial Screen Printing (pt)
	Other Printing of Greeting Cards	323119	Other Commercial Printing (pt)
	Publishing Greeting Cards	511191	Greeting Card Publishers

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Tables 1 and 2: Greeting Cards

But the relationship between SIC and NAICS is often not that simple, as illustrated by SIC 2771 for the manufacture of greeting cards.

At the very bottom you see that publishing greeting cards has its own NAICS code.

Above it you see that the printing of greeting cards has been reclassified into 5 different commercial printing industries, based on the printing technology used.

From an economist's perspective, this exemplifies one of the major improvements in NAICS:

Industries have been reclassified based not on the product produced (like greeting cards), but on the nature of the technology employed (publishing—or creating—versus printing).

Table 1 Codes: U-U.S. only; C-U.S. and Canada; E-existing industry; N-new; R-revised; *-part

1997 NAICS	1997 NAICS-U.S. Description	Codes	1987 SIC	1987 U.S. SIC Description
5112	Periodical Publishers	R	2721	Periodicals: Publishing, or Publishing and Printing
			*2741	Miscellaneous Publishing (shopping news)

51120 Periodical Publishers

This industry comprises establishments known as magazine or periodical publishers. These establishments carry out the operations necessary for producing and distributing magazines and other periodicals, such as gathering, writing, and editing articles, and selling and preparing advertisements. These establishments may publish magazines and other periodicals in print or electronic form.

to Table 1

NAICS	SIC	Corresponding Index Entries
51120	2741	Advertising periodical publishers
51120	2741	Advertising periodical publishers and printing combined
51120	2741	Advertising periodical publishing (i.e., establishments known as publishers)
51120	2721	Agricultural magazine and periodical publishers
51120	2721	Agricultural magazine and periodical publishers and printing combined

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Table 1 and Definition

From the correspondence tables, you can get to narrative definitions of each NAICS category, as well as to listings of the index entries that might bring you to this category.

The correspondence tables are very useful, but when an industry is split, they don't tell you how important each component is. One might guess that shopping news isn't a very big piece to be added to periodical publishers, and therefore is not going to affect data comparability very much, but there are no data here to tell us.

Bridge Between NAICS and SIC

U.S. Census Bureau

1997 Economic Census:
Bridge Between SIC and NAICS
SIC: Manufacturing

SIC 27: Printing and publishing

SIC	NAICS	PI	Description	Establish- ments	Value of Shipments (\$1,000)	Paid employees	Annual payroll (\$1,000)
277	%		Greeting cards	152	5,476,559	21,883	667,444
2771	%		Greeting cards	152	5,476,559	21,883	667,444
00% of 323110	20		Commercial lithographic printing (pt)	28	38,035	355	9,697
00% of 323111	20		Commercial gravure printing (pt)	0	0	0	0
00% of 323112	20		Commercial flexographic printing (pt)	0	0	0	0
00% of 323113	20		Commercial screen printing (pt)	3	10,645	90	3,487
10% of 323119	20		Other commercial printing (pt)	10	26,792	391	10,214
511191			Greeting card publishers	111	5,395,087	21,047	644,046
SIC	NAICS	PI	Description	Establish- ments	Value of Shipments (\$1,000)	Paid employees	Annual payroll (\$1,000)
278	%		Blankbooks and bookbinding	1,704	6,427,964	64,755	1,665,871
2782	%		Blankbooks & looseleaf binders	419	4,467,477	33,406	905,903
20% of 323116	20		Manifold business form printing (pt)	118	1,893,005	15,608	396,564
323118			Blankbook, looseleaf binder, & device mfg	301	2,574,472	17,798	509,339
2789	%		Bookbinding & related work	1,285	1,960,487	31,349	759,968
323121			Tradebinding & related work	1,285	1,960,487	31,349	759,968

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Bridge Between NAICS and SIC

That is why a very important publication has been issued as part of the 1997 Economic Census entitled Bridge between NAICS and SIC. There we have national statistics defining for us just how much of each SIC category is going to each NAICS—and vice versa—thereby defining comparability issues much more thoroughly than any other source.

From this table, we can see that nearly all of the 5 and a half billion in shipments from the greeting card SIC were classified as greeting card publishers (5.4 billion) under NAICS, and the proportions sent to printing industries are so small that they really don't disrupt the comparability of the data.

The web site version of the Bridge tables graphically illustrates the level of comparability with three symbols that take the bridge analogy to its limits....

U.S. Census Bureau

1997 Economic Census:
Bridge Between SIC and NAICS
SIC: Manufacturing

SIC 27: Printing and publishing

SIC	NAICS	PI	Description	Establish- ments	Value of Shipments (\$1,000)	Paid employees	Annual payroll (\$1,000)
277	%		Greeting cards	152	5,476,559	21,883	667,444
2771	%		Greeting cards	152	5,476,559	21,883	667,444
00% of 323110	20		Commercial lithographic printing (pt)	28	38,035	355	9,697
00% of 323111	20		Commercial gravure printing (pt)	0	0	0	0
00% of 323112	20		Commercial flexographic printing (pt)	0	0	0	0
00% of 323113	20		Commercial screen printing (pt)	3	10,645	90	3,487
10% of 323119	20		Other commercial printing (pt)	10	26,792	391	10,214
511191			Greeting card publishers	111	5,395,087	21,047	644,046
SIC	NAICS	PI	Description	Establish- ments	Value of Shipments (\$1,000)	Paid employees	Annual payroll (\$1,000)
278	%		Blankbooks and bookbinding	1,704	6,427,964	64,755	1,665,871
2782	%		Blankbooks & looseleaf binders	419	4,467,477	33,406	905,903
20% of 323116	20		Manifold business form printing (pt)	118	1,893,005	15,608	396,564
323118			Blankbook, looseleaf binder, & device mfg	301	2,574,472	17,798	509,339
2789	%		Bookbinding & related work	1,285	1,960,487	31,349	759,968
323121			Tradebinding & related work	1,285	1,960,487	31,349	759,968

Summary of NAICS parts listed below the symbol % links to Comparative Statistics for 1992 and 1997

(Bridge complete.) Comparable SIC derivable from NAICS data.

(Drawbridge slightly open.) Almost comparable Sales or receipts from NAICS are within 3% of SIC sales or receipts.

(Drawbridge open.) Not comparable SIC sales or receipts cannot be estimated within 3% from NAICS data.

Slide 3 Bridge Between NAICS and SIC: key to bridge icons

The web site version of the Bridge tables graphically illustrates the level of comparability with three symbols that take the bridge analogy to its limits.

- Where there is complete comparability between a NAICS and an SIC, the bridge is complete with superstructure..
- Where the conversion between NAICS and SIC substantially disrupts comparability, a drawbridge is shown open.
- But where we can estimate SIC sales or receipts from NAICS-based data within 3 percent, then the drawbridge is shown as only slightly open, and if you can imagine yourself taking a little risk, you can get across.

Bridge Between NAICS and SIC: NAICS table

U.S. Census Bureau


**1997 Economic Census:
Bridge Between NAICS and SIC
Information****NAICS 511: Publishing industries - 6-digit NAICS by 4-digit SIC**

Includes only establishments with paid [introductory text](#) includes scope and methodology. Figures to the left of SIC codes indicate the percent of SIC receipts represented by that part, and link to Table 1 where other parts of the NAICS are shown. [See](#) links to 1997 and 1992 Comparative Statistics for whole SICs.

NAICS	SIC	Pr	Description	Establish- ments	Reven- ue (\$1,000)	Pay- roll employees	Annual payroll (\$1,000)
5111			Newspaper, periodical, book, & database publishers	21,857	117,390,578	738,005	24,948,197
5111			Newspaper publishers	8,773	41,433,090	400,818	11,729,887
511110			Newspaper publishers	8,773	41,433,090	400,818	11,729,887
511120	2711	11	Periodical publishers	8,773	41,433,090	400,818	11,729,887
511120			Periodical publishers	6,331	29,972,538	137,865	5,997,490
511120	2721	11	Periodicals	6,331	29,972,538	137,865	5,997,490
511120			Book publishers	2,669	12,277,511	90,170	3,655,895
511120			Database & directory publishers	2,669	12,277,511	90,170	3,655,895
511120	2731	11	Database & directory publishers	2,669	12,277,511	90,170	3,655,895
511140			Database & directory publishers	1,459	12,277,511	43,241	1,659,099
511140			Database & directory publishers	1,459	12,277,511	43,241	1,659,099
511140	2741	11	Multiplatform publishers (e)	830	10,676,278	33,113	1,242,004
511140	7331	11	Direct laborers services (e)	629	1,591,232	17,057	317,095
511140			Direct laborers services (e)	2,605	11,021,324	65,961	1,907,026
511911			Printing and related publishing activities	111	5,395,087	21,047	644,040
511911	2771	11	Printing and related publishing activities	111	5,395,087	21,047	644,040

Slide 3 Bridge Between NAICS and SIC: key to bridge icons

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- Where the conversion between NAICS and SIC substantially disrupts comparability, a drawbridge is shown open.
- But where we can estimate SIC sales or receipts from NAICS-based data within 3 percent, then the drawbridge is shown as only slightly open, and if you can imagine yourself taking a little risk, you can get across.

Slide 34 Bridge Between NAICS and SIC: NAICS table

The Bridge report also includes a table organized by NAICS.


U.S. Census Bureau

**1997 Economic Census:
Bridge Between SIC and NAICS
SIC: Manufacturing**

SIC 27: Printing and publishing

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2771	2771	Commercial flexographic printing (pt)	0	0	0	0
2771	2771	Commercial screen printing (pt)	3	10,645	90	3,247
2771	2771	Other commercial printing (pt)	10	26,792	391	10,481
2771	2771	Greeting card publishers	111	5,395,087	21,047	644,046
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2781	2781	Manifold business form printing (pt)	118	1,893,005	15,608	396,564
2781	2781	Blankbook, looseleaf binder, & device mfg.	301	2,547,472	17,739	509,339
2789	2789	Bookbinding & related work	1,285	1,960,487	31,349	759,968
2789	2789	Tradebinding & related work	1,285	1,960,487	31,349	759,968

Σ=sum of NAICS parts listed below the symbol links to Comparative Statistics for 1992 and 1997

(Bridge complete.)	Comparable	SIC derivable from NAICS data.
 (Drawbridge slightly open.)	Almost comparable	Sales or receipts from NAICS are within 3% of SIC sales or receipts.
(Drawbridge open.)	Not comparable	SIC sales or receipts cannot be estimated within 3% from NAICS data.

Slide 35

Assembling Time Series

Now that we have seen that there is no simple conversion between SIC and NAICs, we can see just how important 1997 is as a transition year.

In the past, the SIC system gave us consistency in statistics so that we could analyze trends and compute percent changes. The chart illustrates that there are still some 1997 numbers published on an SIC basis, and those are the ones we will need to rely on for trend measurement.

But the 1997 Economic Census is being published primarily on a NAICS basis. NAICS will give us a better foundation for analysis of trends in the future. But in many respects there will be a disconnect. Some series simply will not be able to bridge the gap between the two systems.

Assembling Time Series


Across Economic Censuses

SIC	1987	1992	(1997)
20	1.0	1.0	1.0
21	1.0	1.0	1.0
22	1.0	1.0	1.0
23	1.0	1.0	1.0
24	1.0	1.0	1.0
25	1.0	1.0	1.0
26	1.0	1.0	1.0
27	1.0	1.0	1.0
28	1.0	1.0	1.0
29	1.0	1.0	1.0
30	1.0	1.0	1.0
31	1.0	1.0	1.0
32	1.0	1.0	1.0
33	1.0	1.0	1.0
34	1.0	1.0	1.0
35	1.0	1.0	1.0
36	1.0	1.0	1.0
37	1.0	1.0	1.0
38	1.0	1.0	1.0
39	1.0	1.0	1.0
40	1.0	1.0	1.0
41	1.0	1.0	1.0
42	1.0	1.0	1.0
43	1.0	1.0	1.0
44	1.0	1.0	1.0
45	1.0	1.0	1.0
46	1.0	1.0	1.0
47	1.0	1.0	1.0
48	1.0	1.0	1.0
49	1.0	1.0	1.0
50	1.0	1.0	1.0
51	1.0	1.0	1.0
52	1.0	1.0	1.0
53	1.0	1.0	1.0
54	1.0	1.0	1.0
55	1.0	1.0	1.0
56	1.0	1.0	1.0
57	1.0	1.0	1.0
58	1.0	1.0	1.0
59	1.0	1.0	1.0
60	1.0	1.0	1.0
61	1.0	1.0	1.0
62	1.0	1.0	1.0
63	1.0	1.0	1.0
64	1.0	1.0	1.0
65	1.0	1.0	1.0
66	1.0	1.0	1.0
67	1.0	1.0	1.0
68	1.0	1.0	1.0
69	1.0	1.0	1.0
70	1.0	1.0	1.0
71	1.0	1.0	1.0
72	1.0	1.0	1.0
73	1.0	1.0	1.0
74	1.0	1.0	1.0
75	1.0	1.0	1.0
76	1.0	1.0	1.0
77	1.0	1.0	1.0
78	1.0	1.0	1.0
79	1.0	1.0	1.0
80	1.0	1.0	1.0
81	1.0	1.0	1.0
82	1.0	1.0	1.0
83	1.0	1.0	1.0
84	1.0	1.0	1.0
85	1.0	1.0	1.0
86	1.0	1.0	1.0
87	1.0	1.0	1.0
88	1.0	1.0	1.0
89	1.0	1.0	1.0
90	1.0	1.0	1.0
91	1.0	1.0	1.0
92	1.0	1.0	1.0
93	1.0	1.0	1.0
94	1.0	1.0	1.0
95	1.0	1.0	1.0
96	1.0	1.0	1.0
97	1.0	1.0	1.0
98	1.0	1.0	1.0
99	1.0	1.0	1.0

NAICS	1997	2002	2007
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Slide 36

Implementing NAICS



Implementing NAICS

Census Bureau

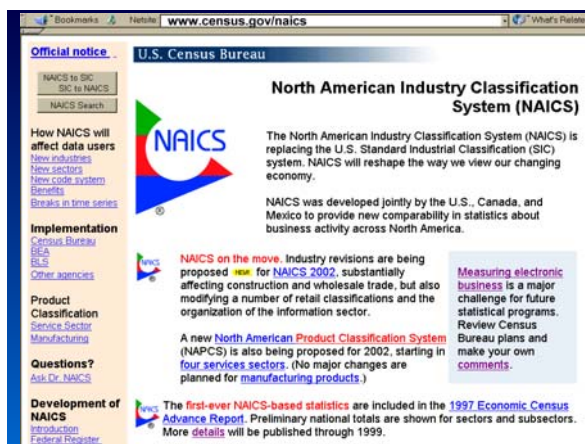
- NAICS replaces SIC in
 - ▶ 1999-2001 1997 Economic Census
 - ▶ 2000 1998 County Business Patterns
 - ▶ 2000 1998 Annual Survey of Mfrs
 - ▶ 2001 1998-9 Annual Retail Trade
 - ▶ 2001 2001 Monthly Retail Trade
 - ▶ 2002 2000 Annual Capital Expenditures

We will be implementing NAICS in all of our industry-based statistics in the future, but it won't happen all at once. NAICS replaces SIC—

- in the Economic Census for 1997
- in County Business Patterns and the Annual Survey of Manufactures for 1998, both just recently released..
- in most other current programs, like Monthly Retail Trade, in 2001, but in many cases with time series rebuilt back to 1997 or 1998.

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NAICS web page



Official notice U.S. Census Bureau

NAICS to SIC
SIC to NAICS
NAICS Search

How NAICS will affect data users
New industries
New code system
Benefits in time series

Implementation
Census Bureau
BLS
Other agencies

Product Classification
Service Sector
Manufacturing

Questions?
Ask Dr. NAICS

Development of NAICS
Introduction
Federal Register
Comments & questions

North American Industry Classification System (NAICS)

The North American Industry Classification System (NAICS) is replacing the U.S. Standard Industrial Classification (SIC) system. NAICS will reshape the way we view our changing economy.

NAICS was developed jointly by the U.S., Canada, and Mexico to provide new comparability in statistics about business activity across North America.

NAICS on the move. Industry revisions are being proposed for NAICS 2002, substantially affecting construction and wholesale trade, but also modifying a number of retail classifications and the organization of the information sector.

Measuring electronic business is a major challenge for future statistical programs. Review Census Bureau plans and make your own comments.

A new **North American Product Classification System (NAPCS)** is also being proposed for 2002, starting in four services sectors. (No major changes are planned for manufacturing products.)

The first-ever NAICS-based statistics are included in the **1997 Economic Census Advance Report**. Preliminary national totals are shown for sectors and subsectors. More details will be published through 1999.

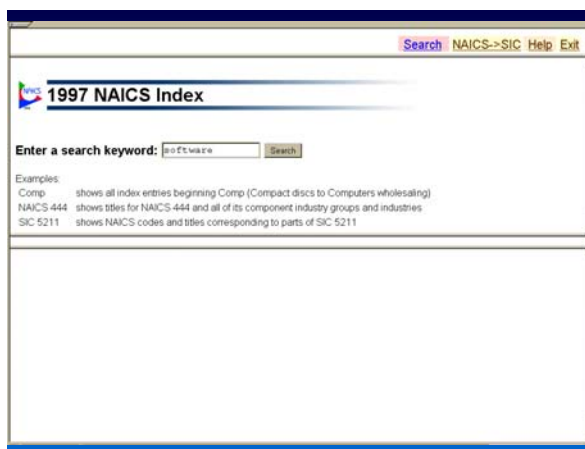
The place to keep up to date is at www.census.gov/naics

This site includes explanatory materials, brochures, conference announcements, ...schedules for when particular publications from other federal agencies will make the switch between SIC and NAICS. ...and papers looking toward the future—on changes to NAICS to be implemented in 2002, and changes we are making to deal with counting electronic commerce.

You can even email questions to our industry classification experts by clicking on “Ask Dr. NAICS”.

In the upper left corner of the page are two buttons

- The first takes you to the NAICS to SIC and SIC to NAICS tables we discussed a moment ago.
- Under that is another button that allows you to search for a particular NAICS code....



Search NAICS->SIC Help Exit

1997 NAICS Index

Enter a search keyword: Search

Examples:
Comp shows all index entries beginning Comp (Compact discs to Computers wholesaling)
NAICS 444 shows titles for NAICS 444 and all of its component industry groups and industries
SIC 5211 shows NAICS codes and titles corresponding to parts of SIC 5211

Slide 38

NAICS Search

You can enter a search term in the box —we will use “software”— and click on the Search button....

Slide 39

NAICS Search (2)

...and the system brings up a list of NAICS codes matching your search term.

You can select the NAICS category most appropriate –we will pick “software publishers”-- then click on the code...

Slide 40

NAICS Search (3)

... to go to the formal definition and list of index terms we saw before.

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NAICS web page

The most recent addition to the NAICS web site is a link to the new Federal Register notice announcing proposed changes for 2002.

Index entry	NAICS Code	U.S. NAICS Title
Software analysis and design services, custom computer	541511	Custom Computer Programming Services
Software application training	611420	Computer Training
Software computer, packaged, publishers	511210	Software Publishers
Software installation services, computer	541519	Other Computer Related Services
Software programming services, custom computer	541511	Custom Computer Programming Services
Software publishers	511210	Software Publishers

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Software analysis and design services, custom computer	541511	Custom Computer Programming Services
Software application training	611420	Computer Training
Software computer, packaged, publishers	511210	Software Publishers
Software installation services, computer	541519	Other Computer Related Services
Software programming services, custom computer	541511	Custom Computer Programming Services
Software publishers	511210	Software Publishers

511210 Software Publishers

This industry comprises establishments primarily engaged in computer software publishing or publishing and reproduction. Establishments in this industry carry out operations necessary for producing and distributing computer software, such as designing, providing documentation, assisting in installation, and providing support services to software purchasers. These establishments may design, develop, and publish, or publish only.

[to Table 1](#)

NAICS SIC	Corresponding Index Entries
511210 7372	Applications software, computer, packaged
511210 7372	Computer software publishers, packaged

Bookmarks NetSite www.census.gov/naics

Official notice U.S. Census Bureau

NAICS to SIC
SIC to NAICS
NAICS Search

How NAICS will affect data users
New industries
New sectors
New code system
Benefits
Breaks in time series

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Service Sector
Manufacturing

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Ask Dr. NAICS

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Introduction & Comments

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Changes for NAICS 2002

- **Construction**
- **Wholesale Trade**
- **Retail Trade: E-tailing**
- **Information: Internet publishing**

Implemented in 2002 Economic Census (published 2004-6)

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Changes for

The forthcoming changes for 2002 are nothing like the wholesale revision we have just gone through, but it completes the work started for 1997.

For example, NAICS 97 established the boundaries for the Construction and Wholesale Trade sectors, but only with NAICS 2002 are the three countries coming to agreement on the industry structure within Construction and Wholesale Trade. There will be a few new industries, like "Residential Remodelers" in Construction, and "Business to Business Electronic Markets" within wholesale trade.

The proposed changes for 2002 also reflect our determination to respond more promptly to changes in the economy.

I mentioned earlier the definition of new Retail Trade industries for Electronic Shopping and Electronic Auctions, separate from Catalog and Mail Order Houses. NAICS 2002 will also separate discount department stores from other department stores.

And there will be reorganizations within the Information sector, among other things separating out internet publishing and broadcasting from the conventional publishing and broadcasting subsectors.

Note that these proposals would not be implemented until the next economic census.

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NAICS web page

So remember www.census.gov/naics. There is also a link to this NAICS page directly off the Census Bureau home page.

Official notice . U.S. Census Bureau

NAICS to SIC
SIC to NAICS
NAICS Search

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NAICS



**North
American
Industry
Classification
System**

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NAICS

With that let's take a break for questions about how industry classification will affect the data you use.

****REPEAT THE QUESTIONS****

Question #1:

Q #2: _____
 Q #3: _____
 Q #4: _____
 Q #5: _____
 Q #6: _____
 Q #7: _____
 Q #8: _____

[In closing off questions, if no host:] We will take a 20-minute break for coffee. If you have an extra moment during the break, take a look at the conference evaluation form you received on the way in.



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